

Claims

1. A materials handling system comprising, a mobile work station and a self propelled tug, said mobile workstation having a roller conveyor supported on a workstation chassis, said chassis having castors engageable with a floor and a tow bar extending from at least one of a side or end of said chassis,

said tug having a body mounted on at least three ground engageable wheels and a tow bar hitch adapted to couple with said extended tow bar such that the rotary axis of at least one of the tug wheels is at least as close to the workstation chassis as the tow bar.

2. A system according to claim 1 wherein the workstation wheels are all mounted to rotate on a single axis located at the side or end of the workstation chassis remote from the tow bar, said workstation chassis having ground engageable supports towards the side or end near the tow bar and said tow bar hitch acting to lift said tow bar and hence the tow bar end of said chassis such that when free standing the workstation is braked by the ground engageable supports and engaged with the floor, and when the tow hitch is coupled to the tow bar the ground engageable supports are raised clear of the ground so that the tug can propel the workstation supported on the wheels and castors.

3. A system according to claim 1 or claim 2 wherein the tow bar is extensible from a position substantially flush with the side of the chassis.

4. A system according to any one of the preceding claims wherein the roller table includes a drive transmission to drive at least some of the rollers, said drive transmission having a drive coupling to co-operate with a corresponding drive coupling provided on the tug whereby the tug provides the power to drive the roller conveyor.

5. A system according to claim 4 wherein the coupling comprises at least one friction drive roller provided on the mobile workstation chassis and arranged to engage a complementary friction drive roller arranged on the self propelled tug.

6. A system according to claim 4 or 5 having an elevating truck dock, said elevating truck dock having a drive coupling arranged to co-operate with the coupling of the mobile workstation to provide power to the roller conveyor.

7. A system according to claim 6 wherein the coupling is provided by a friction drive roller.

8. A system according to any one of the preceding claims including an elevating truck dock, said elevating truck dock comprising a free standing chassis mounted on ground engaging wheels whereby the truck dock can be moved out of the way of an access door of a warehouse.

9. A system according to claim 8, wherein the truck dock is provided with a floor mounted guide rail to guide the truck dock to move laterally in order to align a load with the truck bed of a truck when receiving or discharging the load.

10. A system according to one of claims 8 or 9 wherein the truck dock includes an elevator assembly supported by the truck dock chassis, said elevator assembly having a pair of parallel elevator beams extending one each to either side of a work station bay and having parts projecting laterally to engage beneath the sides of the chassis of a workstation driven into the work station bay.

11. A system according to claim 1 and as herein described with reference to the accompanying figures.

12. A materials handling system comprising a mobile work station and a self propelled tug, said mobile workstation having a roller conveyor supported on a workstation chassis, said chassis having castors engageable with a floor,

said roller conveyor having a transmission whereby power may be transmitted from a drive coupling to at least one of the rollers of the conveyor, said drive coupling being disposed on an end or side of the mobile workstation to engage with a complementary drive coupling provided on the tug so that when coupled to the tug the roller conveyor can be powered to power a load on to or off of the workstation.

13. A materials handling system comprising a mobile work station and a self propelled tug, said mobile workstation having a roller conveyor supported on a workstation chassis, said chassis having castors engageable with a floor, said chassis comprising elongate side members connected at each end by laterally extending end members and a plurality of laterally extending strengthening beams extending between the side members at longitudinally spaced intervals which support an overlying roller conveyor,

a plurality of floor engaging castors disposed adjacent one end of the workstation and arranged to rotate about a common axis such that only a segment of the roller of each castor projects clear of the end and side members to engage the floor whereby the workstation can support loads of between 5 and 9 metric tonnes but presents a roller conveyor plane of between 180mm and 230mm.

14. A materials handling system comprising a truck dock comprising a chassis supporting an elevator, said elevator being adapted to receive a mobile workstation and elevate the workstation between floor height and the height of a truck bed, said truck dock chassis being mounted on floor engaging wheels which in normal use, when situated in a warehouse door, allow the truck dock to be moved laterally to align a load with a truck bed

and also allow the truck dock to be moved away from the warehouse door.